Lastly, the meat from these animals is actually measured as to quality. The color, tenderness, chemical composition, and muscle structure are recorded and compared. Samples are also cooked by standard, uniform methods and graded by another official committee.

One thousand cattle were fed in accordance with this program last year. Ribs from 63 head were sent to the Government laboratories for a complete test as to quality. Eleven hundred hogs were slaughtered at the Government abattoir during the last year, most of them being used in the study of factors causing soft pork. Many were experimentally cured to determine the effect of the curing methods on the palatability of the meat.

More than 400 lambs were also slaughtered at the department's experiment farm at Beltsville, Md., for a comparison of various feed-

lot and management practices.

The work is new, but sufficient progress has already been made to warrant the belief that the factors which influence quality in meat can be more definitely measured and controlled. This will be to the advantage of both the person who raises the livestock and the one who eats the meat.

K. F. WARNER.

A study of the retail meat industry has been made in 20 representative cities and towns in all sections of the country. The cities and towns were selected according to geographic distribution, comparability

of general business, density of population, and other comparable characteristics. The purpose of the survey was to determine efficient and inefficient methods of retailing and ascertain the effect

different methods had on livestock production.

Conditions in the retail branch of the industry have undergone marked changes during the past two decades. Changes in living conditions have been responsible for greater economies in distribution, while increased competition of a progressive type has largely displaced the old-time butcher. Accordingly, the requirements for success in the operation of a retail meat market to-day are different. Opportunities for initiative and sales ability have been multiplied,

and in general the standard has been raised.

The factors studied included type of store, location, character of business, practical knowledge of proprietor, source of supply, methods of buying, selling practices, facilities and equipment, advertising, sanitation, bookkeeping, types of employees, attitude toward customers, salesmanship, misleading practices and deception, frequency of turnover, price determinations, disproportionate demand for cuts of meats, spread between wholesale costs and retail prices, volume of business, wastes and shrinkages, number of stores in relation to population, and numerous factors of lesser importance which exert an influence on the industry.

Chief Factors in Industry

The major factors which concern the industry most were found to be insufficient knowledge on the part of many operators, adherence to old methods, inadequate equipment, false and misleading advertising, low degree of sanitation in a large percentage of markets, and a total lack of uniform standards of quality in the sale of meats. Of these, probably the effect produced by misrepresentation is the most important. Consumers, for the most part, have little or no knowledge of differences in quality of meats, consequently are not in position to make selections intelligently. Because of this, some dealers did not hesitate to misrepresent their products to their own financial advantage. This was done principally through misleading displays and advertising. For these purposes meats of high quality were stressed and meats of low quality actually sold.

Procedures of this kind have affected producers of better grades of meat animals because meats of poor quality have, in many cases, been sold as meats of high quality with a consequent loss of confidence on the part of consumers. Misrepresentation in the sale of meats has demonstrated clearly the need for uniform grades. The industry in general will not be placed on a fundamentally satisfactory basis until uniform standards have been universally adopted.

The study showed that too many incompetent men were engaged in operating retail markets. Some of these lacked a knowledge of the fundamental principles on which any business is based. Many had little or no knowledge of the retail meat business prior to their entrance into it. They knew practically nothing concerning percentages and yields of cuts, therefore had no means of knowing how to determine selling prices. Many such operators followed price lists of one or more competitors, regardless of quality of meats handled. Consequently they were operating on a "hit or miss" basis, with the result that their period of operations was likely to be short lived and generally unsatisfactory to all concerned.

Many Without Records

Approximately 50 per cent of the stores studied were found to be operating without adequate bookkeeping records and many of these had no records by which even their operating expenses could be determined. Many admitted their inability to meet competition, yet they failed to appreciate the need for keeping records.

Many dealers were found who were trying to operate with insufficient equipment and inadequate refrigeration. In most such cases waste and shrinkage were factors which could not be controlled satis-

factorily.

Despite the fact that conditions in the retail meat industry have changed materially in recent years, necessitating new methods of operating, many operators still cling to antiquated methods and as a consequence they are unable to meet competition of modern progressive dealers satisfactorily.

W. C. Davis.

MEAT Spoilage; Its Prevention

The spoilage of meats in curing, while fortunately the exception and not the rule, is nevertheless a source of serious loss both to commercial establishments and to farmers. The magnitude

of commercial meat curing is shown by the fact that about 3,000,000,000 pounds, chiefly pork, were placed in cure in establishments operating under Federal inspection during the last fiscal year.